Sri Datta Budaraju

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EXPERIENCE

SMART EYE | MACHINE LEARNING ENGINEER Gothenburg, Sweden | April 2022 - Present
- Integrated LLMs with RAG into Smart Eye's driver monitoring system to develop next-gen in-car AI agents. Optimized latency for real-time experience and attracted a lot of interest at the world's most powerful tech conference, CES, 2024
- Transformed seatbelt detection POC into a robust model with $\geq$93% accuracy across diverse datasets by enhancing dataset quality, refining training procedure, error analysis, and incorporating interpretability methods
- Drove MLOps efforts and scaled core data-intensive processes across the company by transitioning from manual EC2 jobs to AWS batch jobs using Metaflow. This resulted in reducing >50% of the compute costs and $\geq$80% in engineering time
- Designed and developed a scalable KPI reporting module and assisted teams with integrating their models. The interactive system-level reports were crucial in identifying failures in a few models and enabled informed decision-making
- Streamlined cross-team dataset-related processes by standardizing metadata formats and developing efficient workflows
- Helped teams adopt better data and machine learning processes through presentations and technical documents.

VOLVO CARS | SOFTWARE DEVELOPER Gothenburg, Sweden | Aug 2021 - April 2022
- Developed scalable Ansible playbooks, automating the setup and tear-downs of several self-driving test rigs. Reduced recurring setup time from 30-60 mins to 5 mins, directly increasing the overall productivity of the teams
- Deployed a Prometheus and Grafana-based observability platform. Reduced identifying and resolving issues from hours or even days to a few minutes. Integrated a Slack bot to notify stakeholders and provide real-time status updates

MERCEDES BENZ | RESEARCH INTERN Stuttgart, Germany | June 2020 - Dec 2020
- Explored novel unsupervised learning approaches for 3D Human Pose Estimation using VAE-GAN hybrid networks
- Created the 1st 2D-to-3D pose lifting approach that is scalable to the real-world while achieving the SOTA performance

KTH FORMULA STUDENT | LEAD PERCEPTION ENGINEER Stockholm, Sweden | Oct 2018 – Dec 2019
- Lead the lidar and camera-based detection and calibration effort from the data collection to real-world testing phases
- One of the 20 teams shortlisted for the world's largest engineering design competition, Formula Student Germany, 2019

PROGRAMMING SKILLS

LANGUAGES Python, C++, Java **DATA ANALYSIS AND VIZ** Pandas, Spark, Matplotlib, Plotly, Blender
MACHINE LEARNING PyTorch, Metaflow, Keras **MISC** AWS, Jupyter, Git, Terraform, Ansible, ROS, Android Studio

EDUCATION

KTH ROYAL INSTITUTE OF TECHNOLOGY Stockholm, Sweden | Aug 2018 - March 2021
M.Sc in Computer Science, Machine Learning Major

Coursework - Advanced Deep Learning, Robotics and Autonomous Systems, Speech Recognition, Data Intensive Computing

AMRITA SCHOOL OF ENGINEERING Coimbatore, India | Aug. 2015 - July 2018
B.Tech in Computer Science | Cum. GPA: 8.63 with Distinction

Coursework - Intelligent Systems, Digital Image Processing, NLP, Python, Probability, Optimization, Embedded Systems

PROJECTS

BINARIZED NEURAL NETWORK OPTIMIZATION | PYTORCH Oct 2019 – Dec 2019
- Reproduced Neurips19 paper, "Latent Weights Do Not Exist" from scratch including binary layers and optimizers
- Our team obtained $\sim$ top 10 review scores out of 80+ final submissions for the NeurIPS19 Reproducibility Challenge

CLASSICAL PIANO COMPOSER RECOGNITION | KERAS, TENSORFLOW Mar 2019 – Jun 2019
- Analyzed the correlation between the composers using Mel-scaled spectrograms of piano music in Magenta Project dataset
- Experimented with KNN, RNN, LSTM, and GRU to learn the temporal information for this previously unexplored task

OBJECT DETECTION FOR AUTONOMOUS DRONE | ROS, OPENCV, PYTHON, YOLO Feb 2019 – May 2019
- Created a dataset of 15 traffic signs from drone footage and integrated the trained YOLO in ROS for inference on live feeds
- Extracted edges of the signs in the detected bounding box and used Perspective-n-Point to estimate their 3D global position